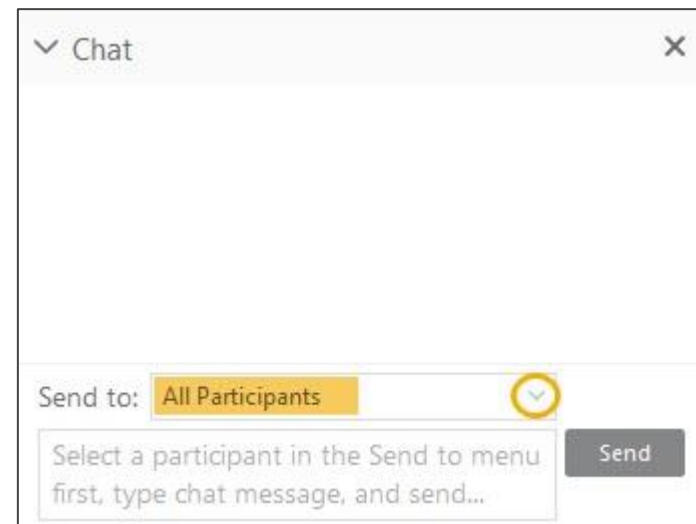
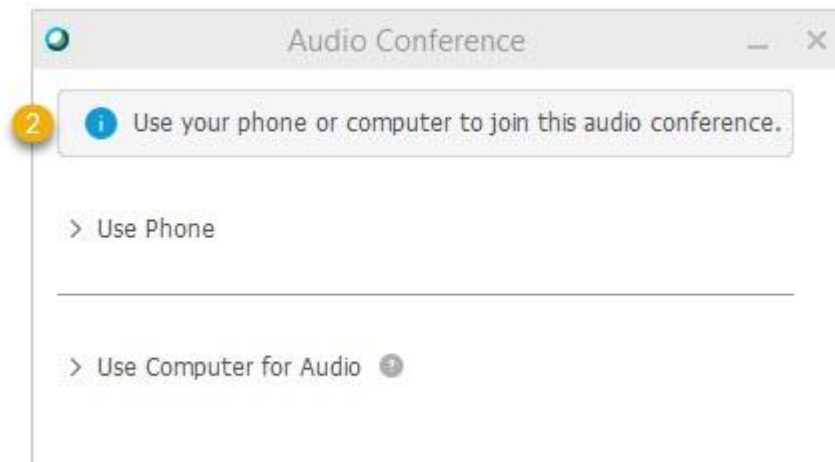


# The webinar will begin at 3pm EST

While you're waiting...

Check your audio connection and find the chat box:



# Citizen Science in the Academic Library

## Part 2

Host:

Kelsey Cowles, MLIS - NNLM MAR

Speakers:

Danica Lewis, MLIS – NC State University

Megan Carlton, MLIS – UNC Greensboro

Dan Stanton, MA – Arizona State University, SciStarter

Caroline Nickerson, MPP – SciStarter



U.S. National Library of Medicine

National Network of Libraries of Medicine

Middle Atlantic Region

**NIH**

National Institutes of Health

**NLM**

National Library of Medicine (NLM)

**NNLM**

Network of the NLM

**MAR**

Middle Atlantic Region



**U.S. National Library of Medicine**

*National Network of Libraries of Medicine  
Middle Atlantic Region*

# Today's Topics

1. How to support faculty who are interested in integrating citizen science projects into their classrooms (Danica)
2. How to work with faculty as they develop their own citizen science projects (Megan)
3. Where to access and how to utilize citizen science resources (including those tailored to academic libraries) and engage with other librarians doing this type of work (Dan & Caroline)



# Live Poll!

**Did you participate in last week's webinar  
(*Citizen Science in the Academic Library:  
Part 1*)?**

**If so, do you have new ideas for utilizing  
citizen science based on what you heard  
last week? Tell us in the chat!**

# Supporting New Course Integrations

**Danica Lewis**, Collections & Research  
Librarian for Life Sciences

North Carolina State University  
Libraries



# Different Kinds of Course Integrations

Courses that need participants

- Research agenda

Courses that need projects

- Research experience

Courses that need case studies and data

- Meta-analysis



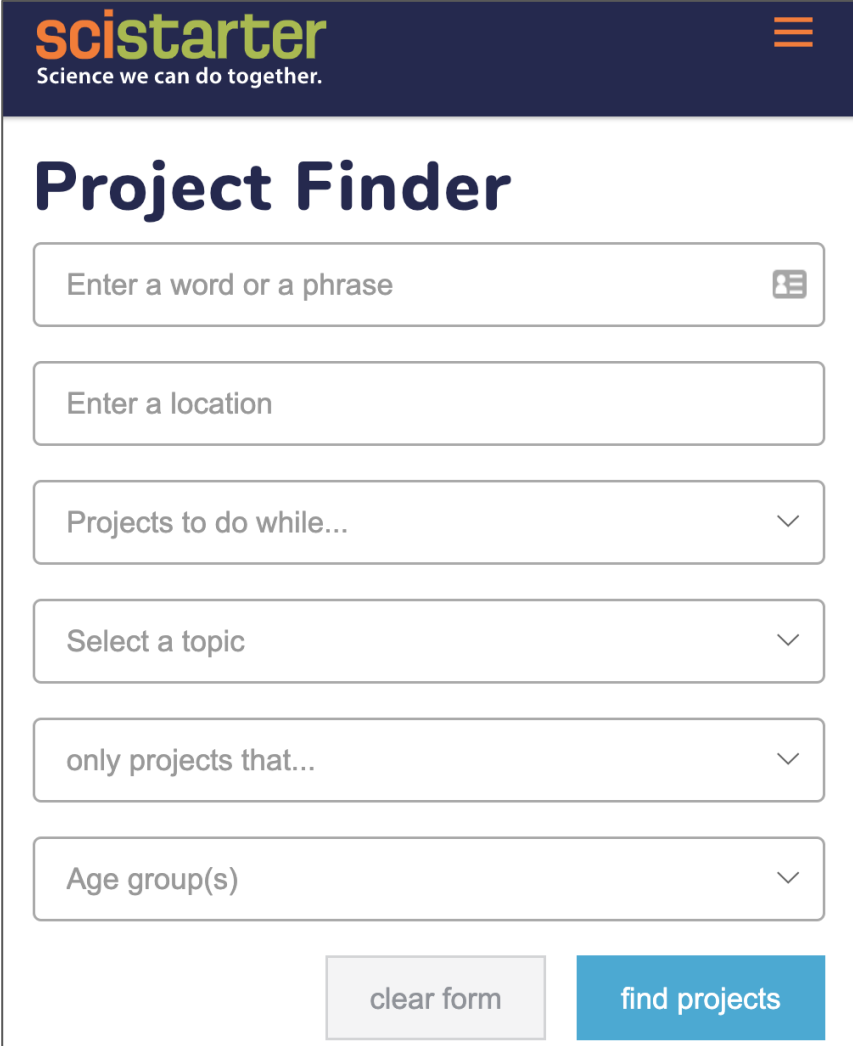
# Identifying Projects

## Expectations

- Research ethics
- Time

## Topics

- Scope
- Expertise



The image shows a screenshot of the SciStarter website's 'Project Finder' interface. The header is dark blue with the 'scistarter' logo in orange and green, and the tagline 'Science we can do together.' in white. A hamburger menu icon is in the top right. The main title 'Project Finder' is in large, bold, dark blue text. Below it are six input fields: a text box for 'Enter a word or a phrase' with a search icon, a text box for 'Enter a location', a dropdown menu for 'Projects to do while...', a dropdown menu for 'Select a topic', a dropdown menu for 'only projects that...', and a dropdown menu for 'Age group(s)'. At the bottom right are two buttons: a light gray 'clear form' button and a blue 'find projects' button.

scistarter  
Science we can do together.

## Project Finder

Enter a word or a phrase

Enter a location

Projects to do while...

Select a topic

only projects that...

Age group(s)

clear form

find projects



# Identifying Related Resources and Materials

## Access

### Citizen Science Equipment

Technology provided by NC State University Libraries in support of the NC State University [Citizen Science Program](#)

As part of our Coronavirus Response, we have a limited number of laptops, document cameras, and other devices for instructors and students to use off campus. [Request a device →](#)



**Stratus Precision Rain Gauge**

Borrow from desk  
1 Week Borrowing Period



**Reconyx Scouting Camera**

Borrow from desk  
4 Weeks Borrowing Period



**RTL SDR Software Defined Radio Scanner**

Borrow from desk  
1 Week Borrowing Period



**Unihedron Sky Quality Meter**

Borrow from desk  
1 Week Borrowing Period



**Celestron Skymaster DX 9X63 Binoculars**

Borrow from desk  
1 Week Borrowing Period



**Checkmate Sound Pressure Level Meter**

Borrow from desk  
1 Week Borrowing Period



**Celestron Handheld Microscope**

Borrow from desk  
1 Week Borrowing Period



**Mobile Phone Macro Lens**

Borrow from desk  
1 Week Borrowing Period

## Funding

### Citizen Science Challenge Sponsors 2018



### Genomic Sciences Laboratory



# Instruction Support

## Remix Existing Instruction

- Refining Your Topic
- Introduction to BLAST Searching

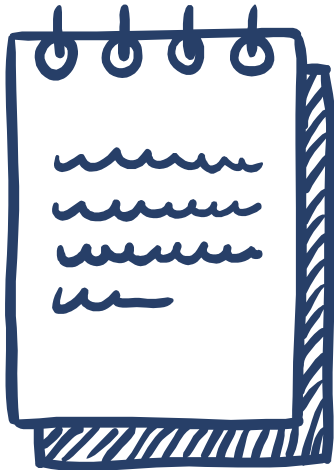
## Final presentations and student spotlights



# Evaluation Methods Support

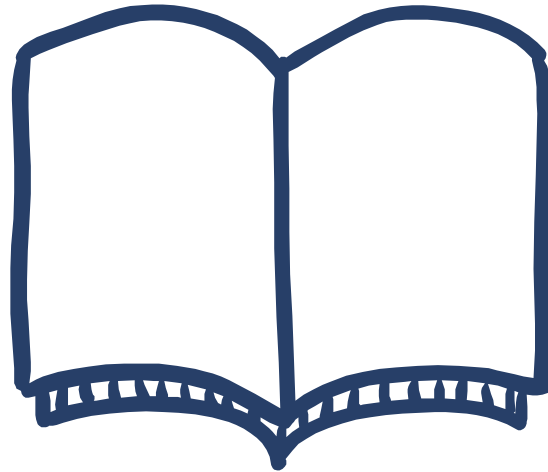
## Tracking Participation

- Registration
- Progress
- Materials



## Learning Outcomes

- Science affinity
- Science agency
- Science efficacy
- Course objectives!



# Supporting faculty in developing citizen science projects

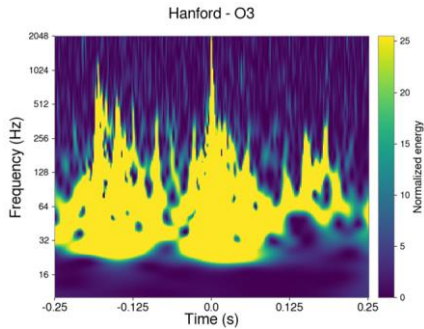
**Megan Carlton**, Science Librarian

University of North Carolina, Greensboro





# Brainstorming with faculty



White River Junction, }  
Oct. 9, 1862. }

Dear Wife:

I know not what weather you are having in Boston; but yesterday it was as hot and sultry as in July; and we experienced the full power of the heat in an excursion to Devil's Mountain, about six miles from friend Johnson's residence.



# Basic steps for planning a project

What data do they have?



What data do they need?



Species Identification

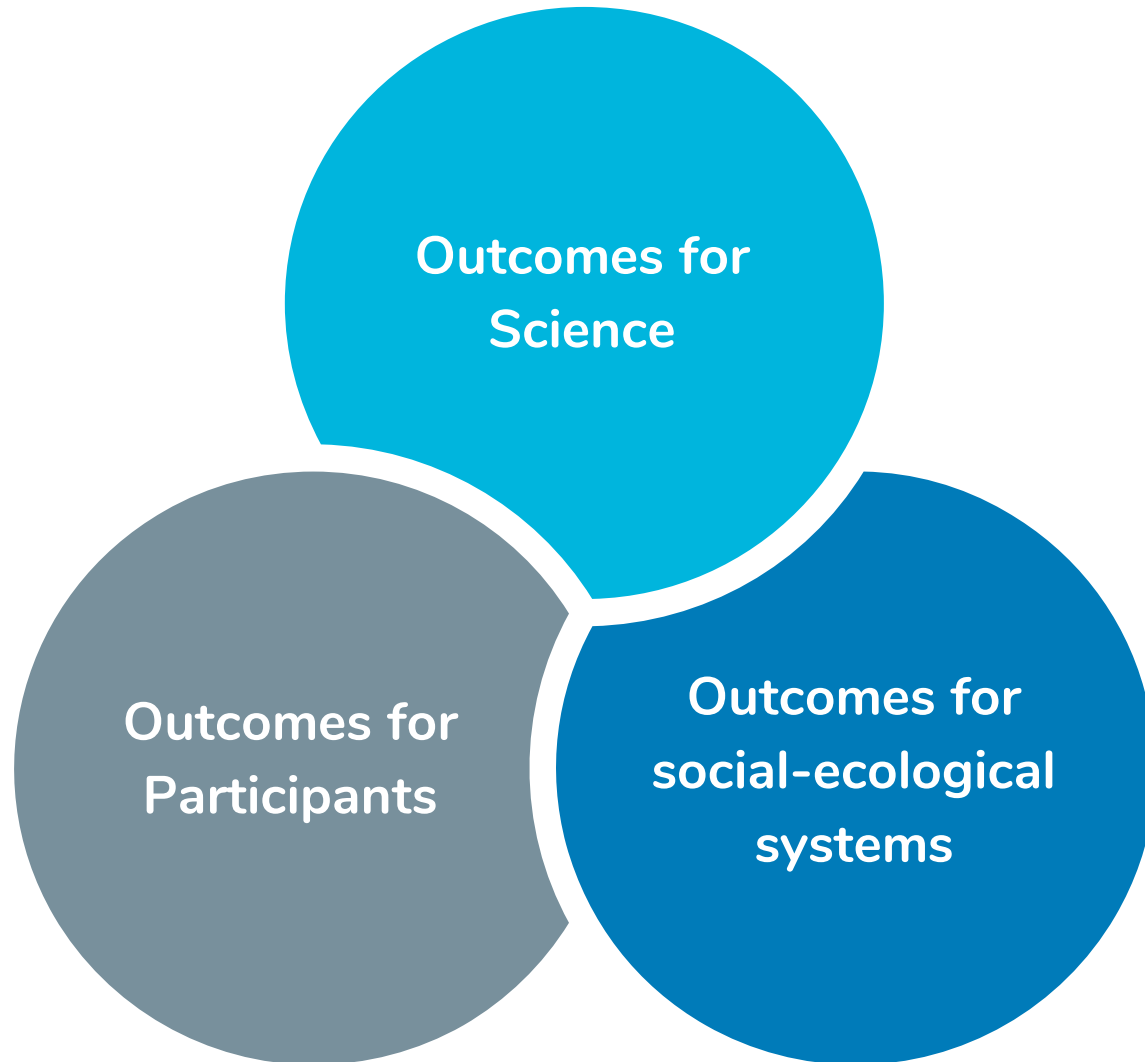
Tree breeding  
program



Cones	Yes
Treated	No
Crown Health	2 - Thinning
Trees Nearby	No trees of this species nearby
hemlockSpecies	Eastern hemlock (Tsuga canadensis)
Tree Diameter	15.99 Inches
Woolly Adelgids	25-49%
Crown Classification	Overtopped. This tree's crown is entirely below other trees nearby.
Habitat	Roadside, urban, suburban, or park
Coordinates	41.21881943, -72.98781967000001



# Considerations for planning a project





# Designing a project

## Web-based projects

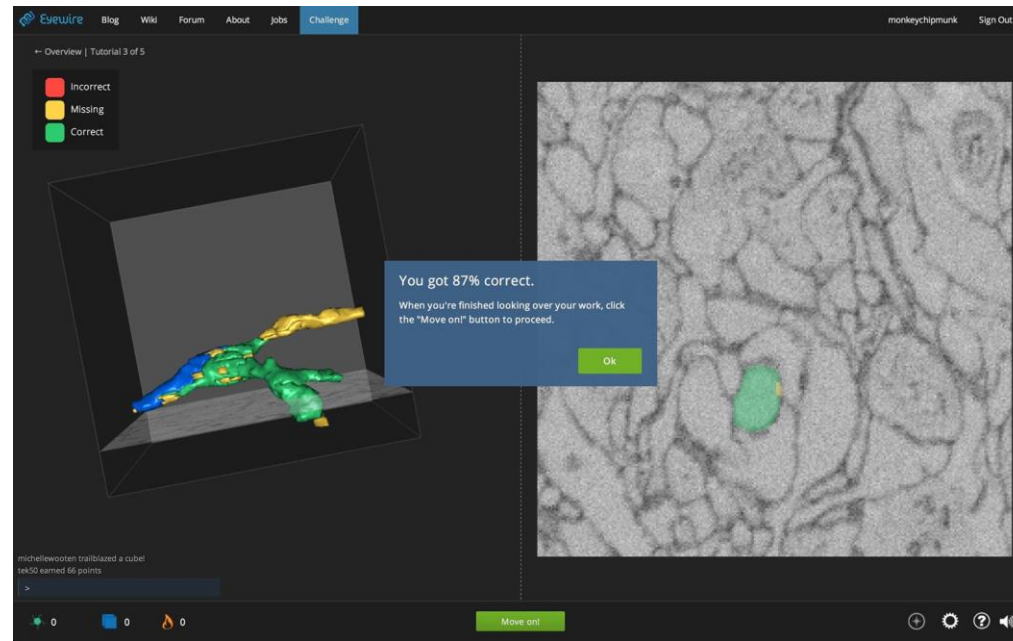
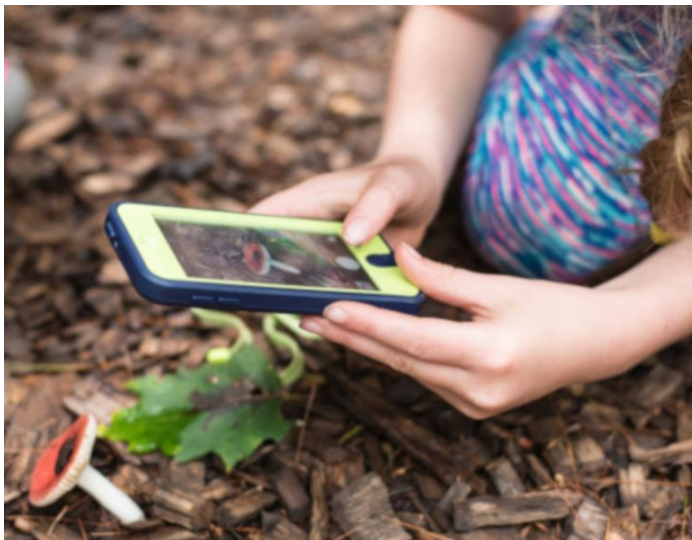


## Community-based projects



## Games

## Field-based projects





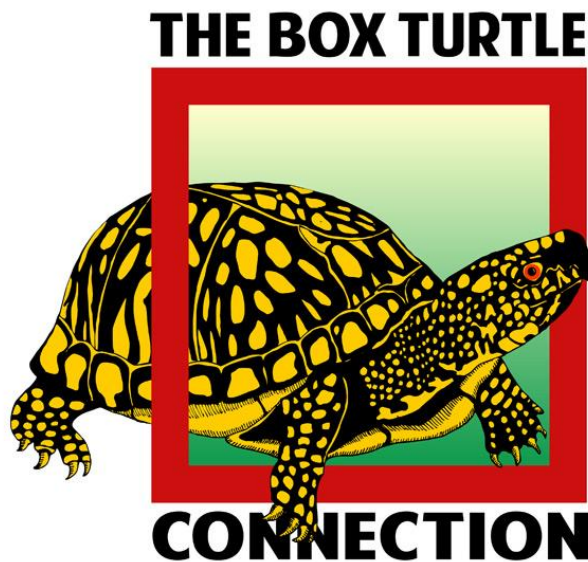
# What makes a project successful?

**Table 2. Framework of influential resource characteristics in citizen science programs for natural resource monitoring.**

<i>Biophysical and geographical</i>	<i>Awareness and knowledge</i>
Geographic scale and range of resource	Self-organization of a community or group around resource
Life cycle of species or duration of process	
Accessibility	Public awareness of resource
Visibility	Knowledgeability of dedicated population
Proximity to populated areas	Ease of training or learning for monitoring
<i>Management and monitoring</i>	<i>Social and cultural</i>
Institutions involved in management of the resource	Resource perceived as charismatic or ecologically significant
Mandates for monitoring or protection	Economic or livelihood reliance on the resource
Data types and collection methods required for monitoring	Social or cultural significance and interaction with the resource
Existing monitoring processes already in place	Resource impact on health and well-being of people

- Accessibility
- Diverse Partnerships
- Social or Cultural Significance

# Building a Community - Partnerships



The original group consisted of North Carolinian educators and biologists, representing four institutions of higher education:

- Davidson College
- Elon University
- University of North Carolina at Greensboro
- University of North Carolina at Pembroke

and four state agencies:

- NC Parks and Recreation
- NC State Museum of Natural Sciences
- NC Wildlife Resources Commission
- NC Zoo

# Building a Community - Volunteers

Know your community

Interact with volunteers

Share information

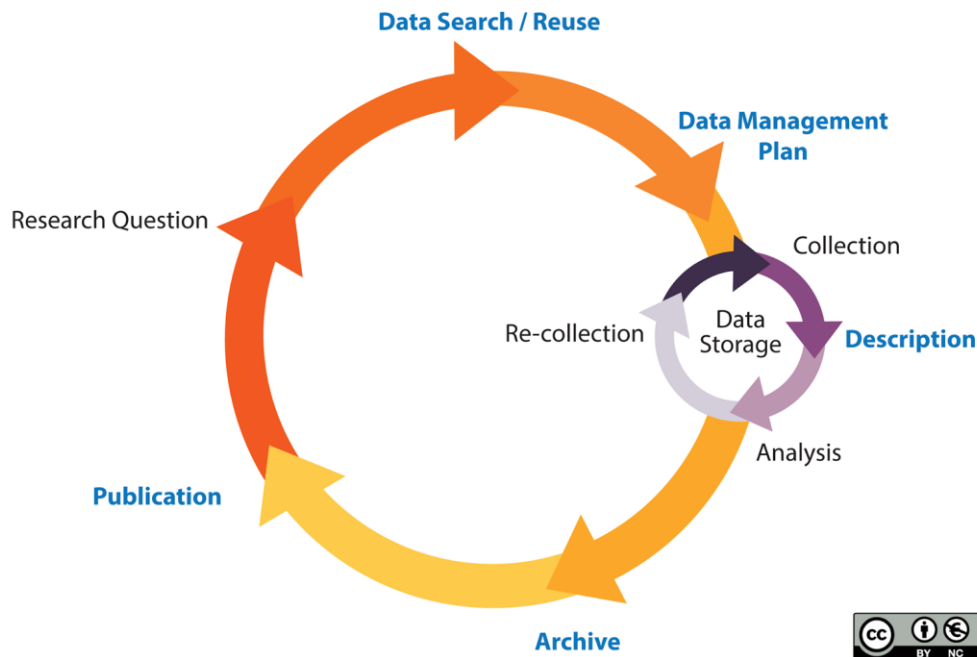
Accept feedback from  
participants

Acknowledge achievements



# Managing Data

## The Research Data Management Lifecycle



Prepare a data management plan.

Acquire your data.

Process your data.

Analyze your data.

Share your data.

Preserve your data.

# Resources for Librarians to Explore and Get Started!

**Dan Stanton**

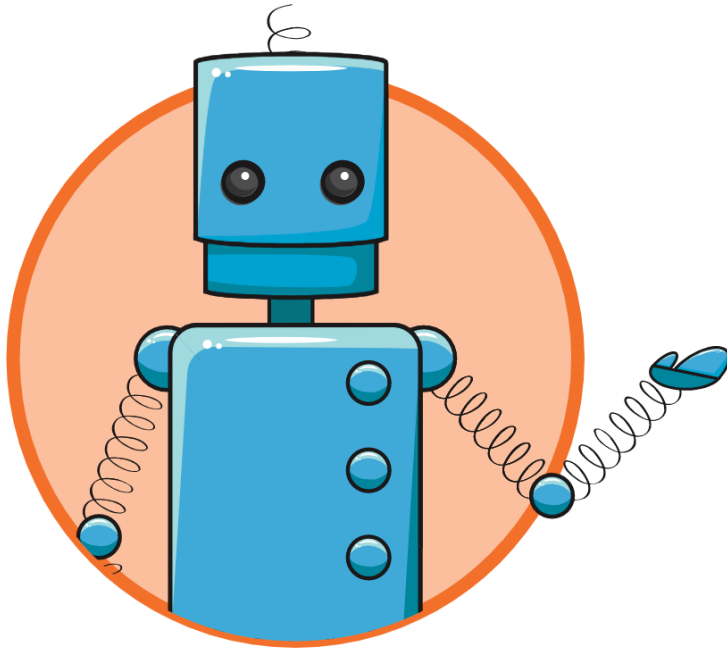
Research and Engagement Librarian  
Arizona State University Library/SciStarter



**Caroline Nickerson**, Program Manager  
SciStarter



# New (beta) feature: lists!



- Tracking and ID'ing participation on SciStarter

Designed to support educators, parent-teachers, community organizers and other facilitators seeking real-world STEM curriculum supplements.

- Best with affiliate projects
- [bit.ly/SciStarterListsHowTo](https://bit.ly/SciStarterListsHowTo)



# SciStarter Education

- Adding more projects!
- Recommended for different grade-levels
- Classroom materials

[SciStarter.org/education](https://SciStarter.org/education)

## Projects for College Students



### CROWD THE TAP

Join an investigation of safe drinking water.



### SATELLITE STREAK WATCHER

Photographically record satellite streaks across the night sky to monitor this form of sky pollution.



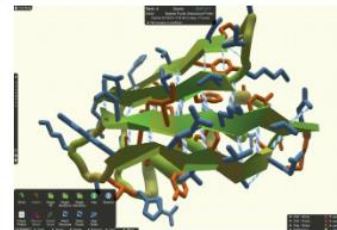
### FLU NEAR YOU

Spread the word. Not the flu.



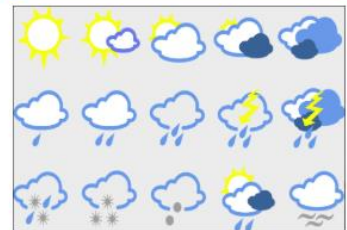
### STREAM TRACKER

Navigate to streams and record when and where there is flow



### FOLDIT

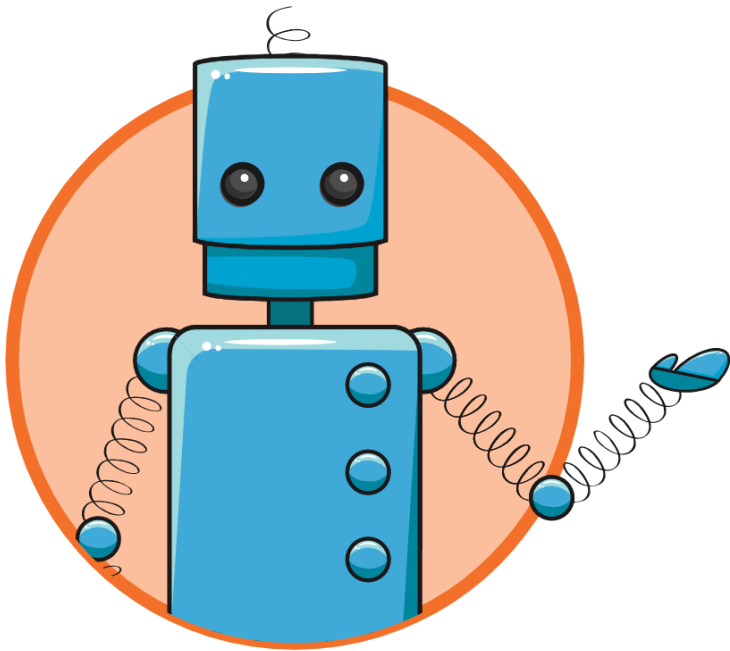
Help researchers discover new antiviral drugs that might stop coronavirus.



### MPING

Collect global observations of weather conditions at the ground.

# SciStarter Videos Page



- How-to videos for projects
- Webinars recorded by libraries, museums, community groups and more
- Can be used as a programming opportunity! Example: “Chasing Steve” Q&A Recording was played as a volunteer opportunity for NASA Goddard Space Flight Center staff

[SciStarter.org/citizen-science-videos](https://SciStarter.org/citizen-science-videos)



# Summer Reading

- Presented by SciStarter and NNLM
- 12 events in partnership with public libraries across the country
- Explore the featured projects and RSVP for events:  
[SciStarter.org/NLM](http://SciStarter.org/NLM)



# CitSciMonth 2021

- Plan an event with us in 2020 or 2021
- It's a party, and academic libraries are invited!
- Social media takeovers ongoing: [bit.ly/CitSciMonthTakeover](https://bit.ly/CitSciMonthTakeover)
- How to get started: weekly Thursday Office Hours. Sign up at [CitizenScienceMonth.org](https://CitizenScienceMonth.org)



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Join us during  
the month of April!

# Library Resources

- New resources added often!
- Library and Community Guide, Tutorials and more!
- Best place to check:  
**SciStarter.org/Library-Resources**



# Association of College and Research Libraries



[ACRL Framework](#)



[STS Website](#)

[Information Literacy Standards for Science and Engineering/Technology](#)



- [Citizen Science Association](#)
- [Citizen Science Discussion listserv](#)
- [Citizen Science: Theory and Practice](#)
- [Webinars, Presentations, and Interviews](#)
  - [Incorporate Citizen Science in Your Higher Ed Course](#)

# Options for Introducing Citizen Science

- Create a [Library Guide](#)
- Create a network of interested parties [@ASU\\_CitSci](#)
- [Host your own event](#)
  - ASU-SciStarter [Citizen Science Month Sampler Celebration!](#)
  - [Tutorial](#)
- Partner to teach a course

Course	Title	Class#	Instructor	Days	Start	End	Location	Dates	Units
FIS 294	Topic: Introduction to Citizen Science ▼	95882	Cavalier, Stanton				iCourse	10/12 - 12/04(B)	3

# Thank you for joining us to learn about citizen science in the academic library!

## Further Questions?

Email Kelsey: [kac221@pitt.edu](mailto:kac221@pitt.edu)

I will direct your question to the speaker(s) as appropriate!

*Developed resources reported in this program are supported by the National Library of Medicine (NLM), National Institutes of Health (NIH) under cooperative agreement number UG4LM012342 with the University of Pittsburgh, Health Sciences Library System. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.*



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